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EXAMINER

PATEL, ASHOKKUMAR B

ART UNIT PAPER NUMBER

2154

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Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/981,301	<b>Applicant(s)</b> ROACH ET AL.	
	<b>Examiner</b> Ashok B. Patel	<b>Art Unit</b> 2154	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 25 August 2005.  
 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.  
 4a) Of the above claim(s) 1-14 and 19 is/are withdrawn from consideration.  
 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
 6) ☒ Claim(s) 15-18 and 20-42 is/are rejected.  
 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) ☐ All b) ☐ Some \* c) ☐ None of:  
 1. ☐ Certified copies of the priority documents have been received.  
 2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
 \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. Claims 1-42 are subject to examination. Claims 1-14 have been restricted and claim 19 have been cancelled.

### ***Response to Arguments***

2. Applicant's arguments with respect to claims 15-18 and 20-4 have been considered but are moot in view of the new ground(s) of rejection.

### **Discussion of known prior art:**

Due to the breadth of the claims and the breadth of the arguments presented on 08/25/2005, a brief overview of prior art and general known subject matter in the related computing environments is warranted. And as such, Examiner would like to present the known state of the OSI model by also addressing the Applicant's arguments as well.

### **Applicant's argument:**

"All pending claims stand rejected as obvious over Cleary et al. in view of Berg et al. It is respectfully submitted that these claims are not obvious over the cited references. Each of the pending independent claims, as amended, requires the encoding or decoding of "UDP packets that include ... frame header information generated at the application layer (of the OSI model)."

### **Examiner's response:**

The known state of the OSI model is taught by the references Elnozahy (US 2002.0178068 A1) and Schweitzer et al. (US 2004/0049576 A1).

Schweitzer et al. teaches at para.[0024]-[0026],

**[0024] Comparison of TCP/IP Model with OSI Model**

[0025] This specification uses terminology from the TCP/IP Model to describe networks. However, a brief description of the OSI Model is appropriate. The OSI model, or Open Systems Interconnection Reference Model, is a seven-layer model comprising the following layers: physical (1); data link (2); network (3); transport (4); session (5); presentation (6); and application (7).

[0026] The TCP/IP Model terminology used in this specification can be mapped onto the OSI Model as follows: host-to-network (1/2); Internet Protocol (IP) (3); Transmission Control Protocol (TCP) and/or User Datagram Protocol (UDP) (4); and application layer (7). The TCP/IP model does not include an analogous set of abstraction for layers five and six of the OSI model. The application layer in the TCP/IP model is comprised of higher-level protocols such as file transfer protocol (FTP), hypertext transfer protocol (HTTP), etc.”

Now, Elnozahy teaches at para.[0015], “[0015] Referring to FIG. 2, a conceptualized representation of a frame 200 suitable for transmission over an OSI model compliant network 104 is presented. As illustrated, frame 200 includes a data field 202 (also referred to as a payload) an application layer header 204, a transport layer header 206, and a network layer header 208. Specific implementations of network 104 may require additional headers as well. In an embodiment in which network 104 is a TCP/IP network, such as the case in which network 104 represents the Internet, the transport layer header 206 represents the TCP header, and the network layer 208 represents the IP header. If the frame is issued as part of a web based request from

web browser 102, the request is likely an HTTP formatted request in which case the application layer header 204 of frame 200 is an HTTP header."

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 15-17, 19,, 20, 22, 24, 28, 34, 36-38, and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cleary et al. (US Pub. 2002/0174438)(hereinafter Cleary) in view of Elnozahy (US 2002.0178068 A1)

**Referring to claim 15,**

Cleary teaches a data distribution center for transferring user datagram protocol packets to an end user comprising: an encoder/decoder (codec) configured to alternatively encode or decode UDP frame information (Paragraph 0098 encoder converts mpeg data to UPD; Paragraph 0086 decoder converts packets to display compatible format); and wherein the UDP packet is available for delivery to a network destination address or storage located on a local area network or a wide area network (Paragraph 0025; packets provided to requesting user via high speed channel).

Cleary fails to explicitly teach "an Open System Interconnection (OSI) model having at least an application layer and a transport layer represented by a user datagram protocol (UDP), a user datagram protocol (UDP) packets that include frame

header information generated at the application layer to an end user comprising: an encoder/decoder (codec) configured to alternatively encode or decode the UDP packets that include the frame header information generated at the application layer; and a digital signal processor (DSP) portion coupled to the codec, wherein the DSP portion conveys the UDP packets that include the frame header information generated at the application layer, and wherein the UDP packets are available for delivery to a network destination address or storage located on a local area network or a wide area network.

Elnozahy teaches at para.[0015], “[0015] Referring to FIG. 2, a conceptualized representation of a frame 200 suitable for transmission over an OSI model compliant network 104 is presented. As illustrated, frame 200 includes a data field 202 (also referred to as a payload) an application layer header 204, a transport layer header 206, and a network layer header 208. Specific implementations of network 104 may require additional headers as well. In an embodiment in which network 104 is a TCP/IP network, such as the case in which network 104 represents the Internet, the transport layer header 206 represents the TCP header, and the network layer 208 represents the IP header. If the frame is issued as part of a web based request from web browser 102, the request is likely an HTTP formatted request in which case the application layer header 204 of frame 200 is an HTTP header.”

Additionally, Elnozahy teaches at para. [0019], “As their names suggest, network portion 301 of frame 200 includes the network relevant information such as the network layer header 208 and the transport layer header 206 while the data portion 302 of frame 200 includes the request relevant information including the application layer header 204

and any data 202. In addition, network portion 301 may include part or all of data portion 302 or even the entire frame 200 in an embodiment where the error checking mechanism relies upon the frame as whole.” (It is well known that the OSI model, or Open Systems Interconnection Reference Model, is a seven-layer model comprising the following layers: physical (1); data link (2); network (3); transport (4); session (5); presentation (6); and application (7). The TCP/IP Model terminology can be mapped onto the OSI Model as follows: host-to-network (1/2); Internet Protocol (IP) (3); Transmission Control Protocol (TCP) and/or User Datagram Protocol (UDP) (4); and application layer (7). The TCP/IP model does not include an analogous set of abstraction for layers five and six of the OSI model. The application layer in the TCP/IP model is comprised of higher-level protocols such as file transfer protocol (FTP), hypertext transfer protocol (HTTP), etc.)

Therefore, it would have been obvious to one of ordinary skill in this art at the time the invention was made to apply the teachings of Elnozahy to Cleary’s transferring user datagram protocol packets to an end user such that wherein network portion may include part or all of data portion or even the entire frame where the error checking mechanism relies upon the frame as whole.

**Referring to claim 16,**

Cleary teaches the data distribution center of claim 15, further comprising an on-screen display buffer that dynamically assigns display specifications based on application requirements. wherein the application requirements relate to an application selected by

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an end user using a Blntu transceiver (Paragraph 0104., on screen display used by end user to select programming and time-delay parameters).

**Referring to claim 17,**

Cleary does not explicitly teach the data distribution center of claim 15, wherein information included in the UDP packet includes an indicator of UDP delivery of header information.

Elnozahy teaches at para.[0015], “[0015] Referring to FIG. 2, a conceptualized representation of a frame 200 suitable for transmission over an OSI model compliant network 104 is presented. As illustrated, frame 200 includes a data field 202 (also referred to as a payload) an application layer header 204, a transport layer header 206, and a network layer header 208. Specific implementations of network 104 may require additional headers as well. In an embodiment in which network 104 is a TCP/IP network, such as the case in which network 104 represents the Internet, the transport layer header 206 represents the TCP header, and the network layer 208 represents the IP header. If the frame is issued as part of a web based request from web browser 102, the request is likely an HTTP formatted request in which case the application layer header 204 of frame 200 is an HTTP header.”

Additionally, Elnozahy teaches at para. [0019], “As their names suggest, network portion 301 of frame 200 includes the network relevant information such as the network layer header 208 and the transport layer header 206 while the data portion 302 of frame 200 includes the request relevant information including the application layer header 204 and any data 202. In addition, network portion 301 may include part or all of data



portion 302 or even the entire frame 200 in an embodiment where the error checking mechanism relies upon the frame as whole.”

Therefore, it would have been obvious to one of ordinary skill in this art at the time the invention was made to apply the teachings of Elnozahy to Cleary's transferring user datagram protocol packets to an end user such that wherein network portion may include part or all of data portion or even the entire frame where the error checking mechanism relies upon the frame as whole.

**Referring to claim 20,**

Cleary teaches the data distribution center of claim 15, wherein the UDP packet includes at least one from audio, video, and other data (Paragraph 0016. video data or other information on demand).

**Referring to claim 22,**

Cleary teaches the data distribution center of claim 15, wherein the data distribution center interfaces with a broadband interface unit (BIntU) transceiver (item 180, Fig. 1).

Cleary does not explicitly teach that the BIntU transceiver transmits a return packet to the data distribution center in response to the UDP packet. However, Elnozahy teaches at para.[0015], “[0015] Referring to FIG. 2, a conceptualized representation of a frame 200 suitable for transmission over an OSI model compliant network 104 is presented. As illustrated, frame 200 includes a data field 202 (also referred to as a payload) an application layer header 204, a transport layer header 206, and a network layer header 208. Specific implementations of network 104 may require

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additional headers as well. In an embodiment in which network 104 is a TCP/IP network, such as the case in which network 104 represents the Internet, the transport layer header 206 represents the TCP header, and the network layer 208 represents the IP header. If the frame is issued as part of a web based request from web browser 102, the request is likely an HTTP formatted request in which case the application layer header 204 of frame 200 is an HTTP header." (It is well known that the OSI model, or Open Systems Interconnection Reference Model, is a seven-layer model comprising the following layers: physical (1); data link (2); network (3); transport (4); session (5); presentation (6); and application (7). The TCP/IP Model terminology can be mapped onto the OSI Model as follows: host-to-network (1/2); Internet Protocol (IP) (3); Transmission Control Protocol (TCP) and/or User Datagram Protocol (UDP) (4); and application layer (7). The TCP/IP model does not include an analogous set of abstraction for layers five and six of the OSI model. The application layer in the TCP/IP model is comprised of higher-level protocols such as file transfer protocol (FTP), hypertext transfer protocol (HTTP), etc.) Thus, Elnozahy teaches a return packet to the data distribution center in response to the UDP packet.

Therefore, it would have been obvious to one of ordinary skill in this art at the time the invention was made to apply the teachings of Elnozahy to Cleary's transferring user datagram protocol packets to an end user such that wherein network portion may include part or all of data portion or even the entire frame where the error checking mechanism relies upon the frame as whole.

**Referring to claim 24,**

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Cleary teaches the data distribution center of claim 15, wherein the UDP packet is transmitted to a remote BIntu transceiver utilizing security techniques to ensure the identity of an end user (Paragraph 0025; content is encrypted and decrypted by end user).

**Referring to claim 28,**

Cleary teaches the data distribution center of claim 24, wherein the data distribution center interfaces with a broadband interface unit (BIntU) transceiver, wherein the data distribution center selectively transmits a return packet to the BIntu transceiver in response to a received UDP packet, and wherein an end user at the BIntu transceiver can access the UDP packet based on the security techniques. (Paragraph 0025," [0025] In response to a user request propagated via a control channel (i.e., a back channel), the server-side equipment provides an encoded content stream (i.e., a video sequence and related audio sequence) to the requesting user via a high bandwidth forward channel. The subscriber equipment receives the encoded content stream, decodes (and optionally decrypts) the content stream and displays the underlying content on a presentation device, such as a television or other video/audio presentation device.")

**Referring to claim 34,**

Claim 34 is a method claim describing the process carried out by the data distribution center of claim 15. Claim 34 is rejected for the same reasons as claim 15.

**Referring to claim 36,**

Cleary teaches the method of claim 34, wherein the data distribution center transmits the UDP packet to a broadband interface unit (BlntU) transceiver (Fig. 1 , item 180,. Paragraph 0025).

**Referring to claims 37 and 38,**

Claims 37 and 38 are rejected for the same reasons as claims 22 and 24 respectively.

**Referring to claim 42,**

Claim 42 is rejected for the same reason as claim 15.

5. Claims 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cleary and of Elnozahy as applied to claim 15 above, and further in view of Gutmann et al. (US Patent 5,774,674, hereinafter Gutmann).

**Referring to claim 18,**

Cleary teaches the data distribution center of claim 15, including transmission of packets to and end user, and further comprising a processor (Fig. 1, 150, processor in video server; Paragraphs 0019,. receipt of content by end user).

Cleary does not explicitly wherein the UDP packet is received from an end user located at a Blntu transceiver independently of the processor.

Gutmann teaches transmitting datagrams between end user stations with the parameters for the underlying data being negotiated between the stations rather than through a centralized distribution center (col. 1, line 63 - col. 2, line 11)

Therefore it would have been obvious to one of ordinary skill in this art at the time the invention was made to combine the teaching of Cleary and Gutmann cause they both deal with transmission of multimedia data as datagrams in' a broadband network.

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Furthermore, the teaching of Gutmann to pass data to an end user independently of a processor in the data distribution center would allow peer-to-peer communications without increased efficiency by avoiding the overhead of processing data in a node that is not part of the network path between the peer end user stations (See Gutmann col. 1, lines 47-52).

6. Claims 21, 23 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cleary and Elnozahy as applied to claim 15 above, and further in view of Novak (US Published Application 2002/0104099).

**Referring to claim 21,**

Cleary does not explicitly teach the data distribution center of claim 15, wherein the UDP packet includes an applet.

Novak teaches distributing a datagram packet including a Java applet (Paragraph 0081).

Therefore it would have been obvious to one of ordinary skill in this art at the time the invention was made to combine the teaching of Cleary and Novak because they both deal with distribution of multimedia content over a broadband network using datagrams. Furthermore, the teaching of Novak to transmit a packet containing a Java applet would allow providing interactive capabilities at the transceiver thus providing a more efficient user interface for the user to navigate and select content (See Novak, Paragraph 0080).

**Referring to claim 23,**

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Cleary does not explicitly teach the data distribution center of claim 22, wherein the UDP packet includes an applet, and wherein the return packet is transmitted in response to the applet.

Novak teaches distributing a datagram packet including a Java applet (Paragraph 0081).

Therefore it would have been obvious to one of ordinary skill in this art at the time the invention was made to combine the teaching of Cleary and Novak because they both deal with distribution of multimedia content over a broadband network using datagrams. Furthermore, the teaching of Novak to transmit a packet containing a Java applet would allow providing interactive capabilities at the transceiver thus providing a more efficient user interface for the user to navigate and select content (See Novak, Paragraph 0080).

**Referring to claim 35,**

claim 35 is rejected for the same reasons as claim 21.

7. Claims 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cleary and Elnozahy as applied to claim 24 above, and further in view of 'Official Notice'.

**Referring to claims 25, 26 and 27,**

Cleary and **Elnozahy** as applied to claim 24 teach the use of encryption to verify that a packet is delivered to an end user but do not explicitly teach the use of smart cards, biometric technology, or private key encoding. However these techniques were well known in the art at the time the applicants' invention was made. Therefore, it would have been obvious to one of ordinary skill in this art at the time the invention was

made to use these techniques for identifying the recipient because doing so would ensure that content distributed across a public network was received by only by the intended individual thus protecting the ability to generate revenue from offering the service.

8. Claims 29-33, 39 - 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cleary et al. (US Published Application 2002/0174438, hereinafter Cleary) in view of Elnozahy (US 2002.0178068 A1) and further in view of Novak (US Published Application 2002/0104099).

**Referring to claims 29-33,**

These claims describe a method for transmitting UPD packets to a data distribution center from a broadband transceiver. The method described is the method carried out by the apparatus described in claims 15-23 for transmitting packets from a distribution center to a transceiver.

Novak teaches uploading content to a data distribution center for providing to further end users.

Therefore it would have been obvious to one of ordinary skill in this art at the time the invention was made to combine the teaching of Novak and Cleary because they both deal with transmission of datagrams over a broadband network. Furthermore, the teaching of Novak to modify the method taught by Cleary to provide a method for transmitting UDP datagrams to a data distribution center would allow users to efficiently provide multimedia content to end users (See Novak, Paragraphs 0002 - 0008).

**Referring to claims 39 and 41,**

Claims 39 and 41 are rejected for the same reason as claim 29 above.

**Referring to claim 40,**

Cleary teaches the apparatus of claim 39, further comprising: means for encoding UDP frame information to form a second UDP packet, wherein the second UDP packet is transmitted to a second Blntu transceiver (Fig. 1, items 180 showing plurality of transceivers; Paragraphs 0021; packets sent to plurality of recipients).

***Conclusion***

**Examiner's note:** Examiner has cited particular columns and line numbers in the references as applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the



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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ashok B. Patel whose telephone number is (571) 272-3972. The examiner can normally be reached on 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John A. Follansbee can be reached on (571) 272-3964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Abp  
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